



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,678	02/25/2004	Naoki Toyoshima	303.884US1	2999
21186	7590	03/21/2006	EXAMINER	
SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH			GARLAND, STEVEN R	
1600 TCF TOWER			ART UNIT	PAPER NUMBER
121 SOUTH EIGHT STREET				
MINNEAPOLIS, MN 55402			2125	

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/786,678	TOYOSHIMA ET AL.	
	<b>Examiner</b> Steven R. Garland	<b>Art Unit</b> 2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 2/25/04, 5/28/04, 12/15/05.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-105 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-105 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 25 February 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date: _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5/28/04, 12/15/05</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____.                                   |

**DETAILED ACTION**

1. Claims 1-105 are pending.
2. The disclosure is objected to because of the following informalities: on page 12, lines 3 and 5,  $tS_{i,j,k,\dots}$  and  $S_{i,j,k,\dots}$  are mentioned as being in table A but are not shown in table A. Note in the table no S variable with subscripts is shown at all. On page 15, lines 25-26, the input device reference numeral is 760 not 750 and the output device reference numeral is 750 not 760 as shown in figure 7. Page 16, lines 5-6 and page 17, lines 1-14 also use the incorrect reference numerals for the input and output devices.

On page 1, the insertion of the "Cross reference to related applications" section being added by the preliminary amendment should be deleted, since the related application is the instant application.

Appropriate correction is required.

3. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not state that the person making the oath or declaration believes the named inventor or inventors to be the original and first inventor or inventors of the subject matter which is claimed and for which a patent is sought.

Note that the declaration states that "I am the original, first and sole inventor" and then lists multiple inventors with their signatures, it appears that there are joint inventors and if this is the case the declaration should reflect this fact with the correct language referring to joint inventors being used. Otherwise only the sole inventor should sign the declaration.

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-60 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. for example claim 1, is directed to a method of data analysis in which the claim recites data gathering, performing calculations, keying the data ( relating the data to something else such as time and date ), combining the production and non-production data into a single data set and analyzing the data however no useful, concrete, and tangible result is produced such as using the results of the analysis for control.

Similar comments apply to the other claims.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-105 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For example, regarding independent claims

1,9,17,23,26,34,42,48,55,61,69,77,83,89,95,102 and their respective dependent claims the difference between the terms "non-production data" and "production data" is extremely ambiguous when the claims are read in light of the specification and which leads to great uncertainty as to what is being claimed.

For example in claim 1, lines 3-9 refer to production and non-production data, however it is unclear what is to be regarded as production data and what is to be regarded as non-production data when the claims are read in light of the specification.

It would appear that "production data" could be measurements directly related to the manufacturing process being performed ( page 6, lines 30,31, and page 7, line 1). However page 7, lines 11-22, then provides a much broader definition in that the production data can be any data ( the data is not required to even be a measurement ) that relates directly to the manufacturing process, **regardless of what it is actually called.**

Non-production data (or otherwise named as facility data ) could be data from sources not directly related to the manufacturing process ( page 7, lines 23-30). However on page 8, lines 4-6, the definition of non-production data is broaden to any data that does not relate directly to the manufacturing process can be considered to be non-production or facility data, **regardless of what it is called.**

Page 3, lines 16-18, describes equipment control data or equipment data as being facility (non-production ) data such control data would appear to be production data in that it is directly related to the manufacturing process if the equipment is used in the process, but by the cited text it is non production data. Further the language pointed out above **any data can be considered to be production(non-production) data regardless of what it is actually called** does not provide any additional clarity and in fact adds great uncertainty as to what the differences are between the production and non production data.

Art Unit: 2125

It is noted that by use of the definitions cited above including the phrase "**regardless of what it is actually called**" that data which is actually named production data could in fact be "non-production data" and vice versa. This leads to confusion and speculation as to what is being claimed.

Further page 3, line 16 refers to equipment data as facility data which is a form of non-production data. However page 7, lines 11-22, then refers to data such as equipment temperature as offline production data and it is not clear as to whether equipment data is to be regarded as production or non production data.

Additionally dependent claim 6 appears to modify the definition of "production data" to include data that is relevant to the production process and its condition which appears to overlap non-production data on page 7, lines 23-30 leading to more uncertainty. Similar comments apply to the "non-production data " of claim 16.

In regards to claim 2, while a form of collecting production data from a test probe is specified, however no additional guidance is provided as to what the non-production data is leading to speculation as to what it might or might not be.

In claim 11, it is unclear if the temporal periodicity is fixed or not. Note periodicity implies that the signal has a periodic nature, but claim 11 appears to require that it not have a period.

In claim 18, various terms lack a proper antecedent basis, line 2, "the data sources", line 5, "the sampling point"; and line 6 "the process location". Also in claim 18, line 1, "the weighted mean calculation" lacks a clear antecedent basis. It is suggested that "calculation" be changed to --calculations-- to agree with the parent claim.

In claim 19, various terms lack a proper antecedent basis such as in line 4, "the calculated lot data" and "the production lot data"; line 5 "the most recent facility data sampling" ; lines 5-6 "the time of the most recent facility data sampling" and in lines 6-7 "the time of processing the production lot". It is suggested that in each case that "the" (first occurrence in each phrase) be changed to --a--.

In claim 21, it appears that "the calculated non-production data" is in fact "production data" since the keying of production data includes "the calculated non-production data" causing additional confusion as to what is or is not production/non-production data. It is also uncertain as to what is met by the term " the appropriate production data" and the term also lacks a proper antecedent basis.

In claim 64, line 1, "the computer system of claim 51" is referred to, however claim 51 is directed to a method not a system and lacks a computer system. It appears 51 should be changed to 61, it is assumed applicant intended claim 64 to depend on claim 61 not claim 51.

The other claims have problems similar to the various examples given above.

8. In view of the speculation required to interpret the meaning of the claims and their terms no art rejection is applied to claims 1-105 . See In re Steele 134 USPQ 292; 305 F.2d 859.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Behkami et al. 6,775,630 ; Sonderman et al. 6,751,518 ; Diggin et al. 6,580,961 ; Chen et al. 5,726,920 ; and Lantz et al. 5,886,896 are of interest in

correlating data ; trending ; and use of a database. Chen et al. 5,726,920 and Nagase 5,768,144 are of interest in statistical processing of data

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven R. Garland whose telephone number is 571-272-3741. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on 571-272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



*Sr*

Steven R Garland  
Examiner  
Art Unit 2125

\*\*\*

LEO PICARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100